



**CITY OF LODI
COUNCIL COMMUNICATION**

AGENDA TITLE: Receive Advisory Water and Wastewater Usage-Based Rates for the Purpose of Research and Customer Comparison

MEETING DATE: January 6, 2010

PREPARED BY: Public Works Director

RECOMMENDED ACTION: Receive advisory water and wastewater usage-based rates for the purpose of research and customer comparison.

BACKGROUND INFORMATION: As a result of a series of actions by the City Council, a program is in place to install residential water meters throughout the community by the end of 2013. Assembly Bill 2572, adopted in 2004, requires that metered services installed since 1992 begin receiving usage-based water utility bills by January 2011. The City currently provides water and wastewater service to approximately 16,600 single-family residences.

As the City begins the transition from flat rates to usage-based rates, we want to provide comparative utility bill information in advance of January 2011. The water and wastewater rates presented in Exhibits A and B, respectively, are presented as the probable rate structure of the future. However, no billing at this time will occur from the proposed rates. These rates will be subject to the annual indexing increase and other rate increases previously approved by the City Council. Final water and wastewater rates will be recommended for approval in summer 2010 and will be subject to Proposition 218 requirements.

The recommended advisory water and wastewater rates are intended to be revenue neutral. That is, the annual revenue generated from the new rates, in aggregate, should generate the same overall level of income as the current rates. The rates have been developed using data collected from the approximately 2,950 installed water meters, which is about 15 percent of the total meters to be installed. Individual descriptions of the water and wastewater rate structures are provided below.

Water Utility Rate Structure. Based upon the water-usage data collected from single-family homes with meters, single-family customers use an average of 22 hundred cubic feet (CCF) per month, or around 16,500 gallons per month. Monthly water usage varies throughout the year, commensurate with irrigation demands. Water use varies significantly from one customer to the next for a variety of reasons, including but not limited to lot size, household size, type of landscaping, types of water-using appliances, and personal habits and practices. For rate analyses purposes, it is assumed that the average monthly single-family water usage will decrease by about 10 percent (to 20 CCF per month) once metered billing begins. The rate analysis focused upon generating an equivalent to current revenue, and the recommended water rate structure is presented in Exhibit A. The water rate consists of a base charge and a progressive three-tiered commodity charge structure. The weighted average commodity rate is \$1.11 per CCF. All existing rate components are to be consolidated into the fixed service charge and water usage rates.

APPROVED: 
Blair King, City Manager

The City has an existing usage-based rate structure for non-residential customers, and it is recommended that rate structure be maintained for those non-residential accounts for the time being. This structure includes a monthly base charge referenced to the meter size and a commodity charge of \$0.537 per CCF as presented in Exhibit C. It needs to be noted that the non-residential commodity charge is approximately one-half of the weighted average residential commodity charge (\$0.537 versus \$1.11 per CCF) and that future work will need to be done to amend the non-residential rate structure to make it more comparable to the residential commodity charge rate. Both the base charge and commodity charge are likely to be increased.

Exhibit A presents the recommended monthly charge composed of a fixed monthly service charge and a three-tier water rate structure for single-family customers. The fixed service charge will vary by meter size, but to date only ¾-inch meters have been installed at single-family residences. A tiered structure will encourage water conservation while still reflecting cost-of-service requirements. The first tier would include the first 10 CCF of monthly water use, the second tier would include the next 40 CCF of monthly water use, and third tier would include all water use in excess of 50 CCF. The rates have been structured to capture 50 percent of the revenue through the fixed-service charge component and 50 percent through the usage component.

A single-family residential unit that is vacant (zero water usage) would be charged the minimum monthly fixed service charge of \$22.25. With the new meters in place, it will be possible to lock a water service off, and the Council may wish to have staff research options for a "no service" minimum monthly charge.

The advisory water rate structure, like the current wastewater rate structure, is not broken into components (i.e., infrastructure replacement, PCE/TCE cleanup), but those programs are funded to the levels previously established by City Council.

Exhibit D presents examples of how customers may be impacted by the change from a flat rate based on the number of bedrooms compared to the usage-based rate. Monthly water bills under the flat rates are compared with a range of usage (low, medium and high) associated with each home size. In Lodi, 96 percent of single-family homes have either two, three or four bedrooms. The statistical database from the meters in place today include very few one-, five- and six-bedroom homes and, for those types of homes, we have estimated the low, medium and high water usage (italicized in the table) to calculate the comparisons.

Wastewater Utility Rate Structure. The rate structure for the wastewater system will establish a linkage between winter water usage and the fixed monthly charge (July through June) for each single-family wastewater account. Winter water usage is representative of indoor water usage (irrigation systems are normally turned off in winter), and it is reasonable to assume that water usage in winter months is reflective of wastewater flow contributions.

The wastewater rate structure establishes a fixed monthly charge each year based upon the prior winter's water usage and the current rate schedule. The fixed monthly charge includes a fixed service charge component and usage-based charge that varies for each customer based upon winter water usage. The fixed service charge does not vary with meter size because variation in single-family meter sizes is generally due to irrigation demands or fire suppression requirements, not upon wastewater demands.

The recommended wastewater rate schedule is presented in Exhibit B. The rates have been structured to capture 50 percent of the revenue through the fixed service charge component and 50 percent through the usage component. The recommended rates set a monthly fixed service charge of \$18.95 and a usage charge of \$2.15 per CCF for each unit of usage. In July of each year, the wastewater rate for each account for the coming year will be reset based upon usage the prior December through February and the annual indexed rate adjustment will applied, as approved by City Council.

A single-family residential unit that is vacant (zero water usage) would be charged the minimum monthly fixed service charge of \$18.95.

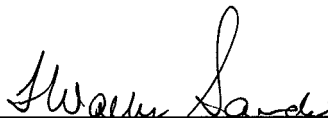
Exhibit E presents examples of how customers may be impacted by the change from a flat rate based on the number of bedrooms to the usage-based approach, which considers winter water usage as the measure of sewer flow. Monthly wastewater bills under the flat rates are compared with a range of usage associated with each home size. In Lodi, 96 percent of single-family homes have either two, three or four bedrooms. The statistical data base from the meters in place today include very few one-, five- and six-bedroom homes and, for those types of homes, we have estimated the low, medium, and high winter usage (*italicized in the table*) to calculate the comparisons.

Some customers will pay more and others less, but the equity between accounts is improved because the amount of the wastewater bill will be tied to usage and not bedroom count. Also, customers will be able to influence their wastewater bill by limiting water usage December through February.

Acting to approve the advisory water and wastewater rates will facilitate an important element of the public outreach for the water meter program to inform customers of the pending changes to the utility rate structures.

FISCAL IMPACT: None at this time. The rates are advisory only.

FUNDING AVAILABLE: There are no costs associated with adoption of advisory rates.



F. Wally Sandelin
Public Works Director

FWS/pmf

Attachments

**PROPOSED ADVISORY RESIDENTIAL WATER RATES
FOR COMPARATIVE BILLING PURPOSES ^{(1) (2)}**

Monthly Fixed Service Charge		
Up to ¾" meter		\$22.25
1" meter		\$36.15
1 ½" meter		\$70.60
2" meter		\$112.10
Water Usage Rates		
Tier 1	0-10 CCF per month	\$0.86 / CCF
Tier 2	11-50 CCF per month	\$1.29 / CCF
Tier 3	> 50 CCF per month	\$1.71 / CCF

Notes:

- ⁽¹⁾ Estimated to be revenue neutral relative to current water rates implemented in July 2008.
- ⁽²⁾ All existing rate components are to be consolidated into the fixed service charge and water usage rates.

**PROPOSED ADVISORY RESIDENTIAL WASTEWATER RATES
FOR COMPARATIVE BILLING PURPOSES ⁽¹⁾**

Monthly Fixed Service Charge	\$18.95
Wastewater Flow Charge Based on Winter Water Usage ⁽²⁾	\$2.15 / CCF
Monthly Wastewater Bills Winter Water Use (CCF)	
0	\$18.95
1	\$21.10
2	\$23.25
3	\$25.40
4	\$27.55
5	\$29.70
6	\$31.85
7	\$34.00
8	\$36.15
9	\$38.30
10	\$40.45
11	\$42.60
12	\$44.75
13	\$46.90
14	\$49.05
15	\$51.20
16	\$53.35
17	\$55.50
18	\$57.65
19	\$59.80
20	\$61.95

Notes:

- ⁽¹⁾ Estimated to be revenue neutral relative to the wastewater rates implemented in July 2009.
- ⁽²⁾ Winter water usage determined as average monthly usage from December through February.

EXISTING COMMERCIAL/INDUSTRIAL WATER RATES

Commercial/Industrial Flat Rate	
Monthly Base Charge:	
¾" Meter	\$11.43
1" Meter	\$17.14
1 ½" Meter	\$22.85
2" Meter	\$28.58
3" Meter	\$40.00
4" Meter	\$51.43
6" Meter	\$74.29
8" Meter	\$97.16
10" Meter	n/a
Water Usage Rates	
Metered Rate	\$0.537 / CCF Approx. \$0.70 per 1,000 gallons

**COMPARISON OF TYPICAL WATER BILLS
UNDER EXISTING AND PROPOSED WATER RATE STRUCTURES**

		1 Bdrm	2 Bdrm	3 Bdrm	4 Bdrm	5 Bdrm	6 Bdrm
Number of Single Family Dwellings		540	4,427	9,448	1,926	260	16
Percent of Single Family Dwellings		3.2%	27.0%	57.0%	12.0%	1.6%	0.1%
		MONTHLY WATER BILL WITH CURRENT RATES					
		\$27.98	\$33.61	\$40.28	\$48.40	\$58.06	\$69.67
		MONTHLY WATER BILL WITH PROPOSED RATES ⁽⁴⁾					
Low Volume User ⁽¹⁾	Water Use (CCF)	4	5	6	7	9	12
	Monthly Bill	\$25.68	\$26.54	\$27.39	\$28.25	\$29.96	\$33.39
Median Volume User ⁽²⁾	Water Use (CCF)	14	16	18	20	24	30
	Monthly Bill	\$35.96	\$38.53	\$41.11	\$43.68	\$48.82	\$56.53
High Volume User ⁽³⁾	Water Use (CCF)	30	35	38	40	45	50
	Monthly Bill	\$56.53	\$62.96	\$66.82	\$69.39	\$75.82	\$82.24

Notes:

- ⁽¹⁾ Low volume use defined as 10th percentile for specified home size.
⁽²⁾ Median volume use defined as 50th percentile for specified home size.
⁽³⁾ High volume use defined as 90th percentile for specified home size.
⁽⁴⁾ Amounts shown in italics are estimates. Insufficient data are available for statistical analysis.

**COMPARISON OF TYPICAL WASTEWATER BILLS
UNDER EXISTING AND PROPOSED WASTEWATER RATE STRUCTURES FOR 2010**

		1 Bdrm	2 Bdrm	3 Bdrm	4 Bdrm	5 Bdrm	6 Bdrm
Number of Single Family Dwellings		540	4,427	9,448	1,926	260	16
Percent of Single Family Dwellings		3.2%	27.0%	57.0%	12.0%	1.6%	0.1%
		MONTHLY WASTEWATER BILL WITH CURRENT RATES					
		\$20.81	\$27.74	\$34.68	\$41.61	\$48.55	\$55.48
		MONTHLY WASTEWATER BILL WITH PROPOSED RATES ⁽⁴⁾					
Low Volume User ⁽¹⁾	Winter Use (CCF)	2	3	3	4	4	5
	Monthly Bill	\$23.25	\$25.40	\$25.40	\$27.55	\$27.55	\$29.70
Median Volume User ⁽²⁾	Winter Use (CCF)	4	7	7	8	8	9
	Monthly Bill	\$27.55	\$34.00	\$34.00	\$36.15	\$36.15	\$38.30
High Volume User ⁽³⁾	Winter Use (CCF)	8	13	14	16	17	18
	Monthly Bill	\$36.15	\$46.90	\$49.05	\$53.35	\$55.50	\$57.65

Notes:

- ⁽¹⁾ Low volume use defined as 10th percentile for specified home size.
⁽²⁾ Median volume use defined as 50th percentile for specified home size.
⁽³⁾ High volume use defined as 90th percentile for specified home size.
⁽⁴⁾ Amounts shown in italics are estimates. Insufficient data are available for statistical analysis.

City of Lodi

Receive Advisory Water and Wastewater Usage-Based Rates

January 6, 2010

The Reed Group, Inc.



Usage-Based Rates

- City must begin billing based on metered water usage by January 2011
- “Advisory” rates are proposed for 2010 so customers have information to ascertain impacts of new billing requirements
- New rates will be formally presented for adoption in summer of 2010 for implementation in January 2011



Key Rate Structure Issues

- Revenue neutrality
- Water conservation incentive
 - BMP #11
- Single family customer base
 - Total services ~16,600
 - Currently metered ~2,800
 - Metered with use data ~875
- Metering timeline and transition



Proposed Water Rates

- Water rates to include a fixed monthly service charge and a 3-tier water usage rate structure
 - Tier 1 – Indoor water needs
 - Tier 2 – Irrigation usage
 - Tier 3 – Excess water usage
- No changes to current metered water rates at this time



Proposed Water Rates

Monthly Fixed Service Charge

Up to 3/4" meter	\$	22.25
1" meter	\$	36.15
1 1/2" meter	\$	70.60
2" meter	\$	112.10

Water Usage Rates

Tier 1	0-10 CCF per month	\$	0.86	/CCF
Tier 2	11-50 CCF per month	\$	1.29	/CCF
Tier 3	> 50 CCF per month	\$	1.71	/CCF

Notes:

- (1) Estimated to be revenue neutral relative to current water rates implemented in July 2008.
- (2) All existing rate components are to be consolidated into the fixed service charge and water usage rates.



Proposed Wastewater Rates

- Wastewater rates will be a fixed monthly charge that incorporates a service charge and a usage charge based on winter water usage
 - Winter water usage is reflective of flow contribution to the wastewater system
 - Winter usage determined each winter for each residential account; billing to be adjusted each July



Proposed Waste- water Rates

Monthly Fixed Service Charge			
	\$	18.95	
Wastewater Flow Charge			
	\$	2.15	/CCF
Based on Winter Water Usage (2)			
Monthly Wastewater Bills (for various usages)			
Winter Water Use (CCF)			% Accts
0	\$	18.95	0%
1	\$	21.10	1%
2	\$	23.25	3%
3	\$	25.40	5%
4	\$	27.55	6%
5	\$	29.70	9%
6	\$	31.85	9%
7	\$	34.00	13%
8	\$	36.15	9%
9	\$	38.30	8%
10	\$	40.45	6%
11	\$	42.60	7%
12	\$	44.75	5%
13	\$	46.90	3%
14	\$	49.05	3%
15	\$	51.20	3%
16	\$	53.35	1%
17	\$	55.50	1%
18	\$	57.65	1%
19	\$	59.80	1%
20	\$	61.95	1%

Notes:

- (1) Estimated to be revenue neutral relative to the wastewater rates implemented in July 2009.
- (2) Winter water usage determined as average monthly usage from December through February.



Rate Implementation Process

- Receive “advisory” rates
- Provide customers with water usage and flat vs. usage-based bill information during 2010
- Formally adopt new usage-based rates in summer 2010
- Implement adopted rates in Jan. 2011
- Monitor rates/revenue throughout meter transition process



Questions

